continue to paragraph (f)(2) of this section; otherwise perform an additional UDDS preconditioning cycle that concludes with a 12 to 36 hour soak. You may use a forced cooldown system to bring critical vehicle temperatures to within soak temperature limits. Critical temperatures include transmission oil, engine oil, engine coolant, and cabin air temperatures.

(2) Open the vehicle's windows and operate the vehicle over a preconditioning UDDS with no solar heating and with the air conditioning off. At the end of the preconditioning drive, turn off the test vehicle and all cooling fans.

(3) Turn on solar heating within one minute after turning off the engine. Once the solar energy intensity reaches 805 W/m^2, let the vehicle soak for 30 ± 1 minutes. You may alternatively rely on prior measurements to start the soak period after a defined period of warming up to the specified solar heat load. Close the vehicle's windows at the start of the soak period; ensure that the windows are adequately closed where instrumentation and wiring pass through to the interior.

(4) Turn the air conditioning control to the ''on'' position before testing so the air conditioning system is active whenever the engine is running. Place the vehicle in gear 15 seconds after engine starting, which is 3 seconds before the first acceleration. At the end of the driving schedule, simultaneously switch all the sampling, recording, and integrating from SC03 to HFET, including background sampling. Indicate the end of the test cycle in the recorded data. Record the measured dynamometer roll revolutions corresponding to the SC03 driving schedule.

(5) Directly following the SC03 driving schedule, operate the vehicle over the HFET driving schedule. Turn the vehicle off at the end of the driving schedule and simultaneously stop all sampling, recording, and integrating, including background sampling. Indicate the end of the test cycle in the recorded data. Record the measured dynamometer roll revolutions corresponding to the HFET drive schedule. Turn off the solar heating.

(6) Allow the vehicle to remain on the dynamometer for (10 to 15) minutes after emission sampling has concluded. Repeat the testing described in paragraphs (f)(1) through (5) of this section and turn off the vehicle's air conditioner and the solar heating throughout the test run. The windows may be open or closed.

(g) *Calculations.* (1) Determine the mass of CO_2 emissions for each of the two test intervals as described in § 1066.605.

(2) Calculate the composite mass-weighted emissions of CO_2, $e_{CO2\text{-}AC17comp}$, representing the average of the SC03 and HFET emissions, in grams per mile using the following equation:

$$e_{CO2\text{-}AC17comp} = 0.5 \cdot \left(\frac{m_{SC03}}{D_{SC03}} \right) + 0.5 \cdot \left(\frac{m_{HFET}}{D_{HFET}} \right)$$

Where:

m_{SC03} = mass emissions from the SC03 test interval, in grams.

D_{SC03} = measured driving distance during the SC03 test interval, in miles.

m_{HFET} = mass emissions from the HFET test interval, in grams.

D_{HFET} = measured driving distance during the HFET test interval, in miles.

[79 FR 23823,Apr. 28, 2014, as amended 79 FR 36658, June 30, 2014]

Subpart J—Evaporative Emission Test Procedures

§ 1066.901 Applicability and general provisions.

This subpart describes how to measure evaporative and refueling emissions from test vehicles. The provisions of §§ 1066.910 through 1066.930 include general provisions for equipment and calculations related to evaporative and refueling emissions. The provisions of

§§ 1066.950 through 1066.985 describe provisions that apply specifically to motor vehicles subject to standards under 40 CFR part 86, subpart S, or 40 CFR part 1037.

TEST EQUIPMENT AND CALCULATIONS FOR EVAPORATIVE AND REFUELING EMISSIONS

§ 1066.910 SHED enclosure specifications.

Enclosures for evaporative and refueling emissions must meet the specifications described in 40 CFR 86.106–96, 86.107–96(a), and 86.107–98(a).

§ 1066.915 Enclosures; auxiliary systems and equipment.

Enclosures for evaporative and refueling emissions must be equipped with fans, blowers, and measurement and data recording equipment as described in 40 CFR 86.107–98(b) through (h) and (j).

§ 1066.920 Enclosure calibrations.

Enclosures for evaporative and refueling emissions must meet the calibration specifications described in 40 CFR 86.116–94 and 86.117–96.

§ 1066.925 Enclosure calculations for evaporative and refueling emissions.

Calculate emissions for evaporative emissions as described in 40 CFR 86.143–96. Calculate emissions for refueling emissions as described in 40 CFR 86.143–96 and 86.156–98.

§ 1066.930 Equipment for point-source measurement of running losses.

For point-source measurement of running loss emissions, use equipment meeting the specifications in 40 CFR 86.107–96(i)

EVAPORATIVE AND REFUELING EMISSION TEST PROCEDURES FOR MOTOR VEHICLES

§ 1066.950 Fuel temperature profile.

Develop fuel temperature profiles for running loss testing as described in 40 CFR 86.129–94(d).

§ 1066.955 Diurnal emission test.

Test vehicles for diurnal emissions as described in 40 CFR 86.133–96.

§ 1066.960 Running loss test.

Test vehicles for running loss emissions as described in 40 CFR 86.134–96.

§ 1066.965 Hot soak test.

Test vehicles for hot soak emissions as described in 40 CFR 86.138–96.

§ 1066.970 Refueling test for liquid fuels.

Except as described in § 1066.975, test vehicles for refueling emissions as described in 40 CFR 86.150–98, 86.151–98, 86.152–98, and 86.154–98. Keep records as described in 40 CFR 86.155–98.

§ 1066.971 Vehicle and canister preconditioning for the refueling test.

Precondition vehicles for the refueling emission test as described in 40 CFR 86.153–98.

§ 1066.975 Refueling test for LPG.

For vehicles designed to operate on liquefied petroleum gas, measure refueling emissions as described in 40 CFR 86.157–98.

§ 1066.980 Fuel dispensing spitback procedure.

Test vehicles for spitback emissions as described in 40 CFR 86.146–96.

§ 1066.985 Fuel storage system leak test procedure.

(a) *Scope.* Perform this test as required in the standard-setting part to verify that there are no significant leaks in your fuel storage system.

(b) *Measurement principles.* Leaks are detected by measuring pressure, temperature, and flow to calculate an equivalent orifice diameter for the system. Use good engineering judgment to develop and implement leak test equipment. You may not tighten fittings or connections in the vehicle's fuel system to prepare the vehicle for testing.

(c) *Measurement equipment.* Your leak test equipment must meet the following requirements:

(1) Pressure, temperature, and flow sensors must be calibrated with NIST-traceable standards.

(2) Correct flow measurements to standard reference conditions.

(3) Leak test equipment must have the ability to pressurize fuel storage systems to at least 4.1 kPa and have an